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CENTERS OF EXCELLENCE
FOR LABOR MARKET RESEARCH

PROGRAM ENDORSEMENT BRIEF

OPTICAL TECHNOLOGY IN THE FAR NORTH

Far North
Center of Excellence

AUGUST 2021

TABLE OF CONTENTS

Contents

Summary.....	3
Introduction.....	4
Occupational Demand.....	5
Wages	6
Job Postings.....	7
Occupations and Job Titles	7
Employers.....	8
Certifications, Skills, and Experience	8
Education and Training	11
Educational Supply.....	12
Community College Supply	12
Other Postsecondary Supply	12
Findings.....	13
Recommendations	14
Appendix A. Methodology and Sources.....	15

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SUMMARY

The Far North Center of Excellence for Labor Market Research prepared this report to provide a labor market analysis of educational supply and occupational demand for middle-skilled career pathways in the Far North subregion. This report aims to determine if demand in the local labor market is unmet by the supply from existing community college programs and other postsecondary training providers.

This report primarily focuses on training that leads to jobs in middle-skilled occupations - that is, occupations that typically require education beyond a high school diploma but less than a Bachelor's degree - but may include higher-skilled occupations for training pathways that lead to a bachelor's degree. Lowered skilled occupations are rarely considered in this type of analysis due to the lessened barriers for entry-level work, such as no formal education requirements and no requirements for on-the-job training.

Key findings include:

- The Far North subregion held 169 optician and ophthalmic technician jobs in 2020. Optician and ophthalmic technician jobs are projected to increase by 11% over the next five years, adding 94 new jobs to the subregion by 2025.
- Over the next five years, optician and ophthalmic technician occupations are projected to have 18 annual openings in the Far North subregion.
- Wage data shows that optician and ophthalmic technician occupations earn approximately \$14 to \$26, above the subregion's living wage of \$12.74 per hour.
- Awards data analysis shows that Far North training providers did not offer any programs (certificates and associate degrees) in optician and ophthalmic technician training programs over the last three academic years.

Recommendations include:

- Based on the lack of existing optician and ophthalmic programs at Far North community colleges and projected yearly openings, the supply gap analysis shows that the region may have room for additional training.
- Considering both the North and Far North region, the demand analysis estimates that there will be 174 projected annual openings in the broader region yet only 38 average annual awards, all from non-community college training providers.

INTRODUCTION

The Far North Center of Excellence (COE) was asked to provide labor market information for a proposed program at a regional community college. This report focuses on the following Standard Occupational Classification (SOC) occupations and codes:

- These middle-skill occupations require more education and training beyond a high school diploma but less than a four-year degree:
 - Ophthalmic Medical Technicians (29-2057)
 - Opticians, Dispensing (29-2081)
 - Ophthalmic Laboratory Technicians (51-9083)

A review of related programs revealed the following Taxonomy of Programs (TOP) title(s) and code(s) are appropriate for inclusion in this report:

- Optical Tehcnology (1219.00)
- Optics (0961.00)

The corresponding Classification of Instructional Program (CIP) title(s) and code(s) are:

- Optometric Technician/Assistant (51.1802)

OCCUPATIONAL DEMAND

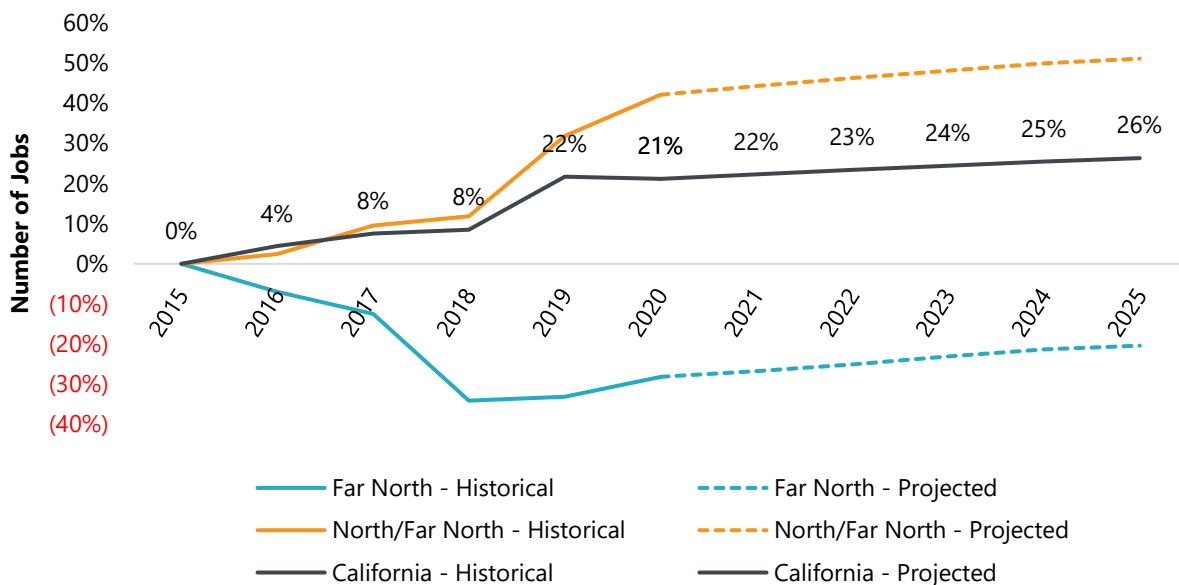
Exhibit 1 summarizes the five-year projected job growth for middle-skill and high-skill occupations in the Far North selected occupations, North/Far North, and California.

Exhibit 1. Employment and projected demand, 2020-2025

Occupation	2020 Jobs	2025 Jobs	2020-2025 Jobs Change	2020-2025 Jobs % Change	2020-2025 Annual Openings
Ophthalmic Medical Technicians	18	19	1	5%	2
Opticians, Dispensing	125	139	14	11%	12
Ophthalmic Laboratory Technicians	25	29	4	15%	4
Far North	169	187	18	11%	18
Ophthalmic Medical Technicians	263	294	31	12%	27
Opticians, Dispensing	843	884	41	5%	69
Ophthalmic Laboratory Technicians	472	500	28	6%	60
North/Far North	1,578	1,678	100	6%	156
Ophthalmic Medical Technicians	4,602	4,900	298	6%	409
Opticians, Dispensing	8,685	8,937	252	3%	674
Ophthalmic Laboratory Technicians	3,145	3,297	152	5%	390
California	16,432	17,134	702	4%	1,474

Exhibit 2 compares the percent change in jobs between 2015 through 2020 and the projected changes through 2025. The rate of change is indexed to the total number of jobs in 2015.

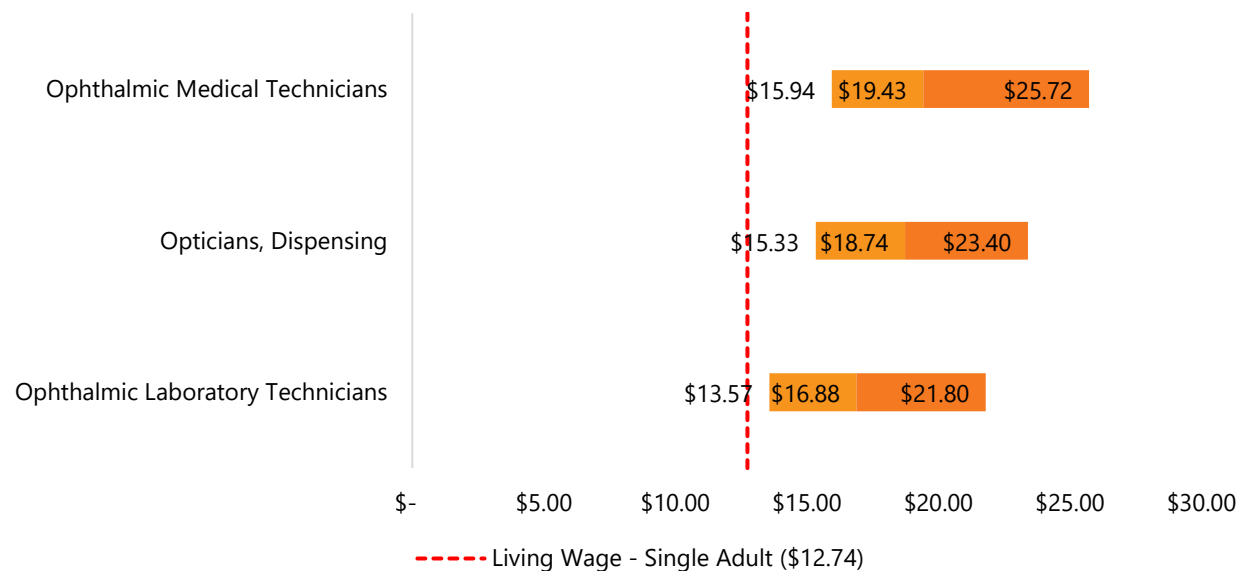
Exhibit 2. Changes in employment, 2015-2025



WAGES

Exhibit 3 compares the entry-level, median, and experienced wages for the selected occupations to the Far North living wage for a single adult - \$12.74 per hour.¹

Exhibit 3. Comparison of wages by occupation, 2019



¹ Living wage is defined as the level of income a single adult with no children must earn to meet basic needs, including food, housing, transportation, healthcare, taxes, and other miscellaneous basic needs. The 25th-percentile and 75th-percentile hourly wages are used as proxy for entry-level and experienced-level wages.

JOB POSTINGS

This section of the report analyzes recent data from online job postings (real-time LMI). Online job postings may provide additional insight into recent changes in the labor market that are not captured by historical trends.

The Far North COE identified 27 online job postings for the selected occupations in the Far North subregion. Job postings data comes from Burning Glass Labor Insights and represents new listings posted online within the last year, from August 1, 2020, to July 31, 2021.

Occupations and Job Titles

Exhibit 4 details the number of online job postings for the selected occupations.

Exhibit 4. Number of job postings by occupation

Occupation	Job Postings	Share of Job Postings
Ophthalmic Medical Technicians	16	59%
Opticians, Dispensing	11	41%
Ophthalmic Laboratory Technicians	0	0%
Total Job Postings	27	100%

Exhibit 5 shows the top 10 job titles with the most job postings and the share of job postings. All job postings included a job title.

Exhibit 5. Top jobs titles

Job Title	Job Postings	Share of Job Postings
Ophthalmic Technician	8	30%
Optician	7	26%
Optometric Technician/Assistant	4	15%
Ophthalmic Technician Outpatient - Adventist Health Valley	2	7%
Lenscrafters - Licensed Optician	1	4%

Job Title	Job Postings	Share of Job Postings
Licensed Optician	1	4%
Non-Licensed Optician-Costco	1	4%
Ophthalmic Assistant	1	4%
Ophthalmic Technician/Medical Assistant	1	4%
Optician/Eyewear Consultant	1	4%

Employers

Exhibit 6 shows the top 10 employers with the most job postings for the selected occupations. Seven percent (n = 2) of job postings did not include an employer.

Exhibit 6. Employers with the most job postings

Employer	Job Postings	Share of Job Postings
Eyecare Partners	9	36%
Oroville Hospital	3	12%
Shasta Eye Medical Group	2	8%
Douglas Myers Incorporated	2	8%
Adventist Health	2	8%
Plus Group	1	4%
Lenscrafters Incorporated	1	4%
Eyemart Express	1	4%
Eyecare Services Partners	1	4%
Costco	1	4%

Certifications, Skills, and Experience

Exhibit 7 shows the specialized skills most requested by employers for the selected occupations.

Exhibit 7. Most in-demand specialized skills

Specialized Skill	Skill Postings	Share of Skill Postings
Patient/Family Education and Instruction	15	9%
Ophthalmology	14	8%
Patient Care	12	7%
Fundus	8	5%
Medical Coding	7	4%
Patient Contact	7	4%
Refraction	7	4%
Scheduling	7	4%
Tonometry	7	4%
Appointment Setting	6	3%

Exhibit 8 shows the minimum level of education required by employers for job postings for the selected occupations. Forty-four percent (n = 12) of job postings did not include a preferred education level.

Exhibit 8. Employer-preferred minimum education levels

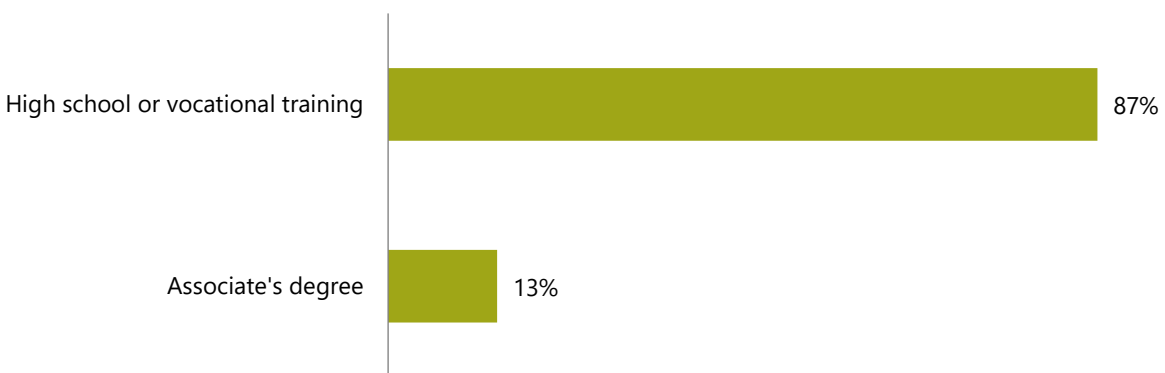
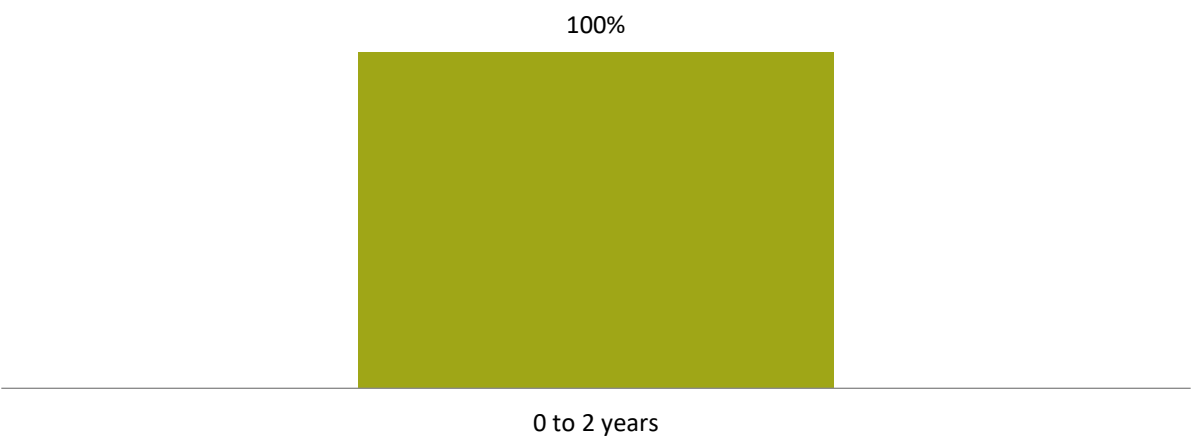


Exhibit 9 shows the experience levels required by employers for job postings for the selected occupations. Fifty-six percent (n = 15) of job postings did not include a preferred education level.

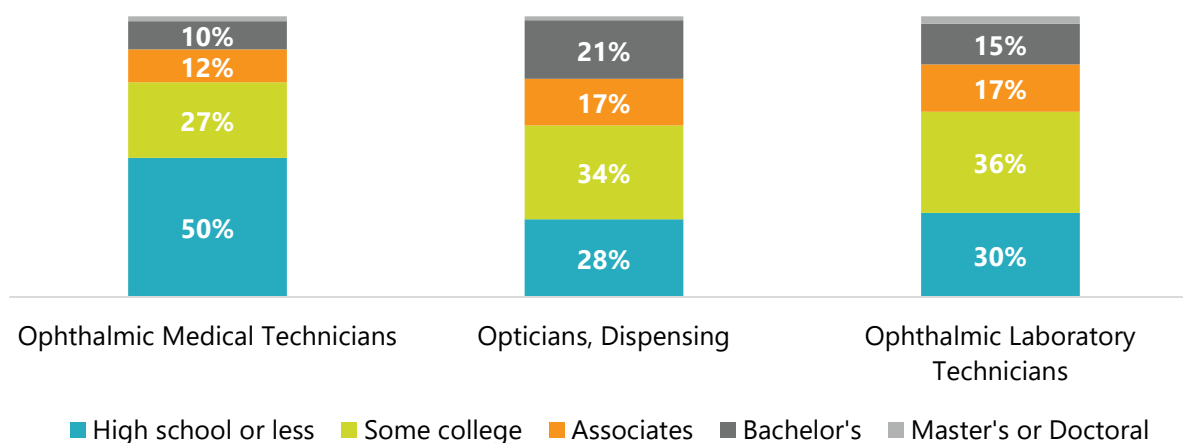
Exhibit 9. Employer-preferred experience levels



EDUCATION AND TRAINING

The U.S. Census Bureau and Bureau of Labor Statistics collects data on education achieved by workers employed in occupations. Exhibit 10 shows the national-level educational attainment of the current workforce in the selected occupations.

Exhibit 10. National worker educational attainment for selected occupations, 2019



The Bureau of Labor Statistics (BLS) uses a system to assign categories for entry-level education, work experience in a related occupation, and typical on-the-job training to each occupation for which the BLS publishes projections data. Exhibit 11 shows the skill level and entry-level job requirements for the selected occupations.

Exhibit 11. Typical education, work experience, and on-the-job training requirements

Occupation	Typical Entry-level Education	Work Experience Required	On-the-job Training Required
Ophthalmic Medical Technicians	Postsecondary nondegree award	None	None
Opticians, Dispensing	High school diploma or equivalent	None	Long-term on-the-job training
Ophthalmic Laboratory Technicians	High school diploma or equivalent	None	Moderate-term on-the-job training

* Note: Even though it is not reflected here, mental health counselors typically require a graduate-level degree and state licensure for entry-level work in California. Source: [California Board of Behavioral Sciences](#).

EDUCATIONAL SUPPLY

Educational supply for an occupation can be estimated by analyzing the number of awards issued in related Taxonomy of Programs (TOP) or Classification of Instructional Programs (CIP) codes. Exhibit 12 shows the TOP and CIP codes for educational programs related to the selected occupations.

Exhibit 12. TOP and CIP codes for training programs related to the selected occupations

TOP Programs and Codes	Aligned CIP Programs and Codes
Optical Technology (1219.00)	Optometric Technician/Assistant (5118.02)
Optics (0961.00)	

Community College Supply

There were no active programs for the related TOP codes at Community Colleges in the North/Far North during the past three years.

Other Postsecondary Supply

Exhibit 13 compares the average number of degrees conferred by non-community college training providers in the North/Far North over the last three academic years. Please note that non-community college data lags by one year. Both non-community college training providers were located in the Greater Sacramento area.

Exhibit 13. Other postsecondary awards by program, 2016-17 through 2018-19

Program - CIP Code	College	Annual Awards 2016-17	Annual Awards 2017-18	Annual Awards 2018-19	3-Yr Annual Awards Average
51.1802 - Optometric Technician/Assistant	Charles A Jones Career and Education Center	28	18	11	19
	National Career Education	19	21	16	19
	Subtotal	47	39	27	38
	Grand Total	47	39	27	38

FINDINGS

This report focuses on three occupations with relevant career pathways in optician and ophthalmic technician jobs.

- The Far North subregion held 169 optician and ophthalmic technician jobs in 2020.
- Optician and ophthalmic technician jobs are projected to increase by 11% over the next five years, adding 94 new jobs to the subregion by 2025. Optician and ophthalmic technician jobs are projected to grow faster in the Far North than in greater California over the next five years.
- Over the next five years, optician and ophthalmic technician occupations are projected to have 18 annual openings in the Far North subregion.
- Wage data shows that optician and ophthalmic technician occupations earn approximately \$14 to \$26 above the subregion's living wage of \$12.74 per hour. Entry-level wages are highest for ophthalmic medical technicians at \$15.94 per hour and the lowest for ophthalmic laboratory technicians at \$13.57 per hour.
- According to real-time labor market information, there were about 27 online job postings for optician and ophthalmic technician occupations between August 1, 2020, and July 31, 2021. Fifty-nine percent (n = 16) of job postings were for ophthalmic medical technicians while 41% of job postings (n = 11) were opticians, dispensing. There were no job postings for ophthalmic laboratory technicians.
- Top job titles and employers are concentrated within a narrow definition of optical services. Most employers were either direct healthcare providers or specialized private eyecare companies.
- Required educational attainment of incumbent workers and entry-level work requirements were aligned for the studied occupations. Between 39% and 72% of optician and ophthalmic technicians have educational attainment levels consistent with community college offerings (some college or associate degrees).
- None of the Far North community colleges offered degrees or certificates in programs related to opticians and ophthalmic technicians. There were two non-community college postsecondary training providers that offered training related to the studied occupations. Between 2016-17 and 2018-19, non-community college training providers conferred an average of 38 awards in optometric programs over the last three years. Please note that non-community college awards data lags by one year.

RECOMMENDATIONS

- Based on the lack of existing optician and ophthalmic programs at Far North community colleges and projected yearly openings, the supply gap analysis shows that the region may have room for additional training. However, with only 18 annual openings projected in the Far North region, demand is low.
- Considering both the North and Far North region, there appears to be a significant need for an optician and ophthalmic training program. The demand analysis estimates that there will be 174 projected annual openings in the broader region yet only 38 average annual awards, all from non-community college training providers.
- The North/Far North Center of Excellence recommends moving forward with the proposed program.

COE Recommendation		
Move forward with the program	Proceed with caution	Program is not recommended
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

APPENDIX A. METHODOLOGY AND SOURCES

Occupations in this report were identified using the Center of Excellence TOP-to-CIP-to-SOC crosswalk and O*Net OnLine. This report's findings were determined using labor market data from the Bureau of Labor Statistics (BLS), U.S. Census Bureau data from Emsi, and jobs posting data from Burning Glass.

Cal-PASS Plus LaunchBoard. California Community Colleges Chancellor's Office.

<https://www.calpassplus.org/LaunchBoard/Home.aspx>.

Emsi. <https://www.economicmodeling.com/>. EMSI occupational employment data are based on final EMSI industry data and final EMSI staffing patterns. Wage estimates are based on Occupational Employment Statistics (QCEW and Non-QCEW Employees classes of worker) and the American Community Survey (Self-Employed and Extended Proprietors).

Educational Attainment for Workers 25 Years and Older by Detailed Occupation, 2016-2017. Bureau of Labor Statistics. <https://www.bls.gov/emp/tables/educational-attainment.htm#>.

Integrated Postsecondary Education Data System (IPEDS). National Center for Education Statistics. U.S. Department of Education. <https://nces.ed.gov/ipeds/>.

"Labor Insight Real-Time Labor Market Information Tool." Burning Glass Technologies. <http://www.burning-glass.com>.

Labor Market Information Division. California Employment Development Department. <https://labormarketinfo.edd.ca.gov/>.

Management Information Systems (MIS) Data Mart. California Community Colleges Chancellor's Office. <https://datamart.cccco.edu/>.

Occupational Employment Statistics (OES). Bureau of Labor Statistics. <https://www.bls.gov/oes/home.htm>.

O*NET OnLine. U.S. Department of Labor/Employment and Training Administration (DOL ETA). <https://www.onetonline.org/>.

Self-Sufficiency Standard Tool for California. The University of Washington.

<http://www.selfsufficiencystandard.org/>

"Taxonomy of Programs." California Community Colleges Chancellor's Office. June 2012, 6th Edition. <https://www.cccco.edu/-/media/CCCCO-Website/About-Us/Divisions/Educational-Services-and-Support/Academic-Affairs/What-we-do/Curriculum-and-Instruction-Unit/Files/TOPmanual6200909corrected12513pdf.ashx>

"TOP-CIP-SOC Crosswalk." Centers of Excellence for Labor Market Research. November 2015 Edition. <http://coecccc.net/>

COVID-19 Statement: This report includes employment projection data by EMSI. EMSI's projections are modeled on recorded (historical) employment figures and incorporate several underlying assumptions, including the assumption that the economy during the projection period will be at approximately full employment or potential output. To the extent that a recession or labor shock, such as the economic effects of COVID-19, can cause long-term structural change, they may impact the projections. At this time, it is not possible to quantify the impact of COVID-19 on projections of industry and occupational employment. Other measures such as unemployment rates and monthly industry employment estimates will reflect the most recent information on employment and jobs in the state and, in combination with input from local employers, may help validate current and future employment needs as depicted here.

Important Disclaimer: All representations included in this report have been produced from primary research and/or secondary review of publicly and/or privately available data and/or research reports. Efforts have been made to qualify and validate the accuracy of the data and the reported findings; however, neither the Centers of Excellence, COE host District, nor California Community Colleges Chancellor's Office are responsible for applications or decisions made by recipient community colleges or their representatives based upon components or recommendations contained in this study.

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